



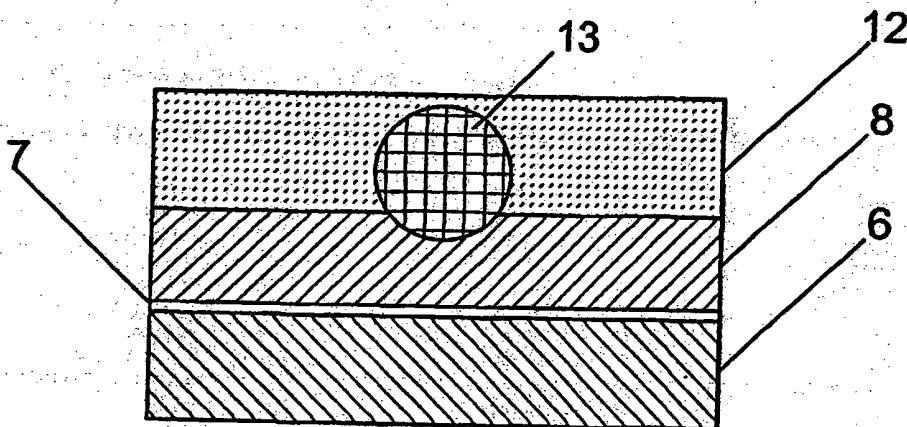
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(54) Title: WAVEGUIDE FOR AN OPTICAL CIRCUIT AND METHOD OF FABRICATION THEREOF

(57) Abstract

A waveguide for an optical circuit comprises a substrate; a buffer layer formed on the substrate; a doped lower cladding layer formed on the buffer layer; a doped waveguide core formed on the lower cladding layer; and a doped upper cladding layer embedding the waveguide core. The waveguide core includes mobile dopant ions which have diffused into the upper cladding layer and the lower cladding layer to form an ion diffusion region around said waveguide core such that the waveguide core boundary walls are substantially smooth. A waveguide core may be formed



which is substantially symmetric about its core axis. Methods of fabricating the waveguide are also described.